



DPM 517
Douglas #1 DPM517

MATERIAL SAFETY DATA SHEET

MSDS NUMBER

8,290-8

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24 HOUR EMERGENCY ASSISTANCE			GENERAL MSDS ASSISTANCE		
SHELL: 713-473-9461 CHEMTREC: 800-424-9300			SHELL: 713-241-4819		
ACUTE HEALTH * + 2	FIRE 3	REACTIVITY 0	HAZARD RATING LEAST - 0 SLIGHT - 1 MODERATE - 2 HIGH - 3 EXTREME - 4		
*For acute and chronic health effects refer to the discussion in Section III					



SECTION I		NAME	
PRODUCT	SHELL SOL BT-67 EC		
CHEMICAL NAME	SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC		
CHEMICAL FAMILY	HYDROCARBON SOLVENT		
SHELL CODE	83237		

SECTION II-A		PRODUCT/INGREDIENT	
NO.	COMPOSITION	CAS NUMBER	PERCENT
P	SHELL SOL BT-67 EC*	64742-89-8	100
-----TYPICAL DISTRIBUTION-----			
.	PARAFFINS	NOT APPLI.	88.7
.	(N-HEXANE.....8%)	110-54-3	--
.	NAPHTHENES	NOT APPLI.	8.6
.	AROMATICS	NOT APPLI.	2.2
.	(TOLUENE.....2%)	108-88-3	--
.	OLEFINS	NOT APPLI.	0.5

*A COMPLEX MIXTURE OF C6 TO C9 HYDROCARBONS; EXACT COMPOSITION WILL VARY.

SECTION II-B		ACUTE TOXICITY DATA	
NO.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
**	>25 ML/KG (RAT)	>5 ML/KG (RABBIT)	>14,000 PPM/4H (RAT)

**BASED UPON TESTING OF AN ESSENTIALLY SIMILAR PRODUCT.

SECTION III HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

EYE CONTACT

LIQUID IS MINIMALLY IRRITATING TO THE EYES. HIGH VAPOR CONCENTRATIONS MAY BE IRRITATING.

SKIN CONTACT

LIQUID IS MILDLY IRRITATING TO THE SKIN. PROLONGED OR REPEATED LIQUID CONTACT CAN RESULT IN DEFATTING AND DRYING OF THE SKIN WHICH MAY RESULT IN SKIN IRRITATION AND DERMATITIS.

INHALATION

VAPORS MAY BE IRRITATING TO NOSE, THROAT AND RESPIRATORY TRACT. HIGH VAPOR CONCENTRATIONS MAY PRODUCE CNS DEPRESSION. PROLONGED AND REPEATED INHALATION OF N-HEXANE (A COMPONENT OF THIS PRODUCT) MAY PRODUCE PERIPHERAL NERVE DAMAGE.

INGESTION

INGESTION OF PRODUCT MAY RESULT IN VOMITING; ASPIRATION (BREATHING) OF VOMITUS INTO THE LUNGS MUST BE AVOIDED AS EVEN SMALL QUANTITIES MAY RESULT IN ASPIRATION PNEUMONITIS.

SIGNS AND SYMPTOMS

IRRITATION AS NOTED ABOVE. EARLY TO MODERATE CNS (CENTRAL NERVOUS SYSTEM) DEPRESSION MAY BE EVIDENCED BY GIDDINESS, HEADACHE, DIZZINESS AND NAUSEA; IN EXTREME CASES, UNCONSCIOUSNESS AND DEATH MAY OCCUR. ASPIRATION PNEUMONITIS MAY BE EVIDENCED BY COUGHING, LABORED BREATHING AND CYANOSIS (BLUISH SKIN); IN SEVERE CASES DEATH MAY OCCUR. PERIPHERAL NERVE DAMAGE MAY BE EVIDENCED BY MUSCULAR WEAKNESS AND LOSS OF SENSATION IN THE ARMS AND LEGS.

AGGRAVATED MEDICAL CONDITIONS

PREEXISTING EYE, SKIN AND RESPIRATORY DISORDERS, OR PREEXISTING IMPAIRED PERIPHERAL NERVE FUNCTION MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

OTHER HEALTH EFFECTS

INTENTIONAL ABUSE, MISUSE OR OTHER MASSIVE EXPOSURE TO TOLUENE MAY CAUSE MULTIPLE ORGAN DAMAGE AND/OR DEATH.

SEE SECTION VI FOR SUPPLEMENTAL INFORMATION.

SECTION IV**OCCUPATIONAL EXPOSURE LIMITS**

NO.	PEL/TWA	OSHA PEL/CEILING	TLV/TWA	ACGIH TLV/STEL	OTHER
P	NOT ESTABLISHED		400 PPM*		
.	500 PPM**		50 PPM**		

* EXPOSURE LIMITS FOR RUBBER SOLVENT RECOMMENDED AS A GUIDE ONLY. **N-HEXANE.

SECTION V**EMERGENCY AND FIRST AID PROCEDURES****EYE CONTACT**

FLUSH EYES WITH PLENTY OF WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

SKIN CONTACT

REMOVE CONTAMINATED CLOTHING/SHOES. FLUSH SKIN WITH WATER. FOLLOW BY WASHING WITH SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION. DO NOT REUSE CLOTHING UNTIL CLEANED.

INHALATION

REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET MEDICAL ATTENTION.

INGESTION

DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. GET MEDICAL ATTENTION.*

NOTE TO PHYSICIAN

*IF MORE THAN 2.0 ML PER KG HAS BEEN INGESTED AND VOMITING HAS NOT OCCURRED, EMESIS SHOULD BE INDUCED WITH SUPERVISION. KEEP VICTIM'S HEAD BELOW HIPS TO PREVENT ASPIRATION. IF SYMPTOMS SUCH AS LOSS OF GAG REFLEX, CONVULSIONS OR UNCONSCIOUSNESS OCCUR BEFORE EMESIS, GASTRIC LAVAGE USING A CUFFED ENDOTRACHEAL TUBE SHOULD BE CONSIDERED.

SECTION VI**SUPPLEMENTAL HEALTH INFORMATION**

THIS PRODUCT CONTAINS TOLUENE AND MAY CONTAIN CERTAIN ISOPARAFFINS THAT HAVE BEEN DEMONSTRATED TO CAUSE CARDIAC SENSITIZATION IN OTHER SPECIES. THERE IS NO EVIDENCE THAT EXPOSURE TO INDUSTRIALLY ACCEPTABLE LEVELS (E.G., THE TLV) OF HYDROCARBONS HAVE PRODUCED CARDIAC EFFECTS IN HUMANS. SUCH SENSITIZATION, HOWEVER, MAY CAUSE FATAL CHANGES IN HEART RHYTHMS. THIS LATTER EFFECT WAS SHOWN TO BE ENHANCED BY HYPOXIA OR THE INJECTION OF ADRENALIN-LIKE AGENTS.

THIS PRODUCT MAY CONTAIN CERTAIN ISOPARAFFINS THAT HAVE BEEN DEMONSTRATED TO CAUSE KIDNEY EFFECTS IN MALE RATS. RATS EXPOSED TO 1400 PPM OR 1200 PPM OF TOLUENE FOR 14H/DAY FOR 4 OR 5 WEEKS RESPECTIVELY EXHIBITED HIGH FREQUENCY HEARING DEFICITS. RATS EXPOSED TO 1400 PPM OR 1200 PPM OF TOLUENE FOR 14H/DAY FOR 4 OR 5 WEEKS (RESPECTIVELY) EXHIBITED HIGH FREQUENCY HEARING DEFICITS. THE SIGNIFICANCE OF THIS INFORMATION TO MAN IS UNKNOWN.

STUDIES ON N-HEXANE IN LABORATORY ANIMALS HAVE SHOWN MILD, TRANSITORY EFFECTS ON THE SPLEEN AND BLOOD (WHITE BLOOD CELLS), AND EVIDENCE OF LUNG DAMAGE. IN ADDITION, FETOTOXICITY HAS BEEN DEMONSTRATED AT LEVELS PRODUCING MATERNAL TOXICITY.

SECTION VII**PHYSICAL DATA**

BOILING POINT: 158-218 (DEG F)	SPECIFIC GRAVITY: 0.69 (H2O=1)	VAPOR PRESSURE: 170 @ (MM HG) 100 DEG F
MELTING POINT: NOT AVAILABLE (DEG F)	SOLUBILITY: NEGLIGIBLE (IN WATER)	VAPOR DENSITY: 3.5* (AIR=1)
EVAPORATION RATE (N-BUTYL ACETATE = 1): 5.5*		*ESTIMATED

APPEARANCE AND ODOR: COLORLESS LIQUID. HYDROCARBON ODOR.

SECTION VIII**FIRE AND EXPLOSION HAZARDS**

FLASH POINT AND METHOD:
0 DEG F (TCC)

FLAMMABLE LIMITS /% VOLUME IN AIR
LOWER: 1 UPPER: 8

EXTINGUISHING MEDIA

USE WATER FOG, FOAM, DRY CHEMICAL OR CO2. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLOAT AND CAN BE REIGNITED ON SUFACE OF WATER.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS

DANGER. EXTREMELY FLAMMABLE. CLEAR FIRE AREA OF UNPROTECTED PERSONNEL AND ISOLATE. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS

CONTAINERS EXPOSED TO INTENSE HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOR PRESSURE BUILDUP WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINER AREAS EXPOSED TO DIRECT FLAME CONTACT SHOULD BE COOLED WITH LARGE QUANTITIES OF WATER AS NEEDED TO PREVENT WEAKENING OF CONTAINER STRUCTURE.

SECTION IX**REACTIVITY**

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:

AVOID HEAT, SPARKS, FLAME AND CONTACT WITH STRONG OXIDIZING AGENTS. PREVENT VAPOR ACCUMULATION.

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

SECTION X**EMPLOYEE PROTECTION**
-----**RESPIRATORY PROTECTION**

AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SEC. IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR

ORGANIC VAPORS.

PROTECTIVE CLOTHING

AVOID CONTACT WITH EYES. WEAR SAFETY GLASSES OR GOGGLES AS APPROPRIATE. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WEAR CHEMICAL-RESISTANT GLOVES AND OTHER CLOTHING AS REQUIRED TO MINIMIZE CONTACT.

ADDITIONAL PROTECTIVE MEASURES

USE EXPLOSION-PROOF VENTILATION AS REQUIRED TO CONTROL VAPOR CONCENTRATIONS. AIR-DRY CONTAMINATED CLOTHING IN A WELL VENTILATED AREA, THEN LAUNDER BEFORE REUSING.

SECTION XI

ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES

DANGER. EXTREMELY FLAMMABLE. ELIMINATE ALL IGNITION SOURCES. HANDLING EQUIPMENT MUST BE GROUNDED TO PREVENT SPARKING. *** LARGE SPILLS *** ISOLATE THE HAZARD AREA AND DENY ENTRY TO UNNECESSARY PERSONNEL. WEAR APPROPRIATE RESPIRATOR AND PROTECTIVE CLOTHING. SHUT OFF SOURCE OF LEAK ONLY IF SAFE TO DO SO. DIKE AND CONTAIN. WATER FOG MAY BE USEFUL IN SUPPRESSING VAPOR CLOUD; CONTAIN RUN-OFF. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND OR OTHER SUITABLE MATERIAL; PLACE IN NON-LEAKING CONTAINERS FOR PROPER DISPOSAL. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE; DISPOSE OF FLUSH SOLUTIONS AS ABOVE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND PLACE IN NON-LEAKING CONTAINERS; SEAL TIGHTLY FOR PROPER DISPOSAL.

WASTE DISPOSAL

UNDER EPA - RCRA (40 CFR 261.21), IF THIS PRODUCT BECOMES A WASTE MATERIAL, IT WOULD BE IGNITABLE HAZARDOUS WASTE, HAZARDOUS WASTE NUMBER D001. REFER TO LATEST EPA OR STATE REGULATIONS REGARDING PROPER DISPOSAL.

ENVIRONMENTAL HAZARDS

UNDER EPA-CWA THIS PRODUCT IS CLASSIFIED AS AN OIL AND CONTAINS A COMPONENT DESIGNATED AS A HAZARDOUS SUBSTANCE UNDER SECTION 311. SPILLS INTO OR LEADING TO WATERS THAT CAUSE A SHEEN MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER, 800-424-8802.

EPA - COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT. UNDER EPA-CERCLA ("SUPERFUND") RELEASES TO AIR, LAND OR WATER WHICH EXCEED THE REPORTABLE QUANTITY MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER, 800-424-8802.

SECTION XII

SPECIAL PRECAUTIONS

KEEP LIQUID AND VAPOR AWAY FROM HEAT, SPARKS AND FLAME. SURFACES THAT ARE SUFFICIENTLY HOT MAY IGNITE EVEN LIQUID PRODUCT IN THE ABSENCE OF SPARKS OR FLAME. EXTINGUISH PILOT LIGHTS, CIGARETTES AND TURN OFF OTHER SOURCES OF IGNITION PRIOR TO USE AND UNTIL ALL VAPORS ARE GONE. VAPORS MAY ACCUMULATE AND TRAVEL TO IGNITION SOURCES DISTANT FROM THE HANDLING SITE; FLASH-FIRE CAN RESULT. KEEP CONTAINERS CLOSED WHEN NOT IN USE. USE WITH ADEQUATE VENTILATION.

CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, CAN CONTAIN EXPLOSIVE VAPORS. DO NOT CUT, DRILL, GRIND, WELD OR PERFORM SIMILAR OPERATIONS ON OR NEAR CONTAINERS.

STATIC ELECTRICITY MAY ACCUMULATE AND CREATE A FIRE HAZARD. GROUND FIXED EQUIPMENT. BOND AND GROUND TRANSFER CONTAINERS AND EQUIPMENT.

SECTION XIII

TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION: FLAMMABLE LIQUID
D.O.T. PROPER SHIPPING NAME: PETROLEUM NAPHTHA

OTHER REQUIREMENTS:

UN 1255. GUIDE SHEET 27. RQ TOLUENE (1000 LB).

SECTION XIV

OTHER REGULATORY CONTROLS

THIS PRODUCT IS LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: NOVEMBER 15, 1985

JOHN P. SEPESI

BE SAFE

READ OUR PRODUCT
SAFETY INFORMATION ...AND PASS IT ON
(PRODUCT LIABILITY LAW
REQUIRES IT)

SHELL OIL COMPANY
PRODUCT SAFETY AND COMPLIANCE
P. O. BOX 4320
HOUSTON, TX 77210

